Docket No.: 082771.P279

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: William F. Terrell Application No.: 09/222,340 Filed: December 28, 1998 For: TASK-BASED MULTIPROCESSING SYSTEM	Examiner: William C. Vaughn Jr. Art Group: 2143

APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicant submits the following Appeal Brief pursuant to 37 C.F.R. § 41.37 for consideration by the Board of Patent Appeals and Interferences. Applicant also submits herewith our check number 0078 in the amount of $500.00 to cover the cost of filing the opening brief as required by 37 C.F.R. §41.20(b). Please charge any additional fees or credit any overpayment to our deposit Account No. 02-2666. A duplicate copy of the Fee Transmittal is enclosed for this purpose.

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I. REAL PARTY IN INTEREST

The real party in interest is the assignee, Nortel Networks Limited.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences known to the appellants, the appellants' legal representative, or assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-14 and 16-26 of the present application are pending and remain rejected. The Applicant hereby appeals the rejection of claims 1-14 and 16-26.

IV. STATUS OF AMENDMENTS

The Applicant filed an amendment on June 9, 2005, in response to a Final Office Action issued by the Examiner on April 13, 2005. In response to the June 9, 2005 amendment, the Examiner issued an Advisory Action on July 20, 2005. The Applicant filed a Notice of Appeal from the Advisory Action issued by the Examiner on August 16, 2005.

V. SUMMARY OF CLAIMED SUBJECT MATTER

1. Independent claims 1, 13, and 21:

A data network 100 includes a plurality of clients (112, 114, 116, 120, 122, 128 and 130) communicatively coupled to a network core device 108 via a network edge device (110, 118, and 124)[1]. A network device 200 includes input/output drivers 202 and 208, network interface 204 and controller 206[2]. The controller 206 controls the dynamic provision of filters 210 and classifier profiles 222 providing access to the differentiated services offered within the domain of resident core device(s)[3].

[1] See Specification, page 8, lines 5-10; Figure 1.
[2] See Specification, page 12, lines 18-20; Figure 2.
[3] See Specification, page 12, lines 21-22; page 13, lines 1-7.

The network interface 204 includes Decaps/DeMUX unit 210, filter(s) 212 classifier 214 including profiles 222, routing unit 216, Encaps/Multiplexer (MUX) 218 and scheduler 220[4].

The filter(s) 212 and classifier 214 are employed to identify incoming data traffic adhering to admission policy criteria and marks the data packets with an appropriate routing classification in accordance with a predetermined differentiated services admission policy. The filter 212 provides an indication, or trigger, denoting when data packets are received that satisfy filter criteria. The filter(s) 212 are dynamically provisioned on network interface 204 by the controller 206 in accordance with an admission control policy[5].

The classifier 214 functions to classify and mark data packets in accordance with their service level. In operation, once a trigger is received denoting receipt of data packets satisfying the filter criteria of at least one filter 212, the controller 206 updates the installed profiles 222 of classifier 214 such that any data packets received at classifier 214 satisfying at least one profile 222 will be marked in accordance with their subscribed service level[6].

The controller 206 creates and removes specific filters from filter 212 in response to control messages from a remote bandwidth broker, e.g., bandwidth broker 126. In one embodiment, controller 206 is a bandwidth broker and creates/removes specific filters from the filter 212 on its own accord. Once in place, the filter 212 issues a trigger message to controller 206 when data packets are received satisfying the criteria of an installed filter[7]. The controller 206 is responsible for the provision of filters 212 and classifier profiles 222 necessary to support differentiated services via network edge device 110. The access to the differentiated services of core device 108 is dynamically controlled through the selective provision of trigger filters and classifier profiles on network devices, e.g., network device 110, as appropriate[8]. In essence, the controller 206 dynamically controls the provision of filters 212 and classifier profiles 222 in accordance with a differentiated services admission policy, thereby reducing the resources dedicated to support differentiated services[9].

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[4] See Specification, page 13, lines 14-17.
[5] See Specification, page 13, lines 20-22; page 14, lines 1-4.
[6] See Specification, page 14, lines 11-15.
[7] See Specification, page 13, lines 20-22; page 14, lines 1-10.
[8] See Specification, page 19, lines 13-21.

2. Dependent claims 5, 6, 16, 19, 22, and 23:

The clients 128, 130, bandwidth broker 126 and network edge device 124 coupled via network 105 form LAN 104[10]. The bandwidth broker 126 of LAN 104 controls provision of differentiated services at a network level for the domain associated with core device 108. The bandwidth broker 126 maintains an admission policy database, which correlates subscribed services to admission filters and classifier profiles that, when triggered, are installed on or removed from network edge devices as appropriate[11]. In one embodiment, the controller 206 is the bandwidth broker 126 and may be remotely located and communicatively coupled to network device 200 and network interface 204[12].

The Type of Service (ToS) field in a header appended to the data packet is marked to denote an appropriate level of service for transmission of the data packet. In one embodiment, the header 400 is a byte wide, containing up to eight separate data fields. The ToS field 402 is a one-bit field. Consequently, ToS field 402 can be marked to differentiate two levels of service, associated with a ToS field 402 entry of '0' or '1'. In one embodiment, for example, a ToS field 402 populated with a '0' denotes a best-effort service level. Accordingly, when data packets are received which do not satisfy filter criteria, classifier 214 updates the ToS field 402 of the header appended to such data packets with a '0'. Alternatively, receipt of data packets satisfying filter 212 criteria may result in marking the ToS field 402 of the header appended to such data packets with a '1', denoting an expedited forwarding (EF) level of service[13]. Once the appropriate profile 222 has been installed in classifier 214, classifier 214 marks the ToS field 402 of header 400 appended to the received data packets in accordance with their subscribed service level. In one embodiment, for example, ToS field 402 is marked to denote a best effort service level[14].

3. Dependent claims 12 and 26:

The admission profile database 500 includes classifiers 502 and 504 and associated profiles 512-522 differentiated based on time of day indicators 506, 508 and 510. In one embodiment, the filter established on a network edge device corresponds to an appropriate

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[9] See Specification, page 16, lines 10-13.
[10] See Specification, page 9, lines 1-12.
[11] See Specification, page 10, lines 4-17.
[12] See Specification, page 13, lines 1-5; page 14, lines 6-8.
[13] See Specification, page 14, lines 15-22; page 15, lines 1-15; Figure 4.

one or more of classifiers 502 and 504, such that the filter associated with classifier 502 monitors received network traffic for data packets emanating from network A (e.g., LAN 102) destined for network B (e.g., LAN 106). Accordingly, when a hit is received corresponding to classifier 502 during the hours of 9-5, profile 512 will be installed in classifier 214 of network edge device 110 of LAN 102 to mark data packets satisfying the filter criteria in accordance with their subscribed service level. Such packets may be marked for expedited forwarding (EF) with a throughput rate of 10Mbps, no burst in accordance with profile 512. Packets corresponding to classifier 502 received before 9AM or after 5PM will be marked for best-effort delivery, in accordance with profiles 514 and 516. Similarly, profiles 518-522 denote service level support for network traffic defined by classifier 504[15].

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 1-4, 7-11, 13, 14, 17, 18, 20, 21, 24, and 25 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,341,130 issued to Lakshman et al. ("Lakshman") in view of Barzilai et al. ("Barzilai") "Design and Implementation of an RSVP-Based Quality of Service Architecture for an Integrated Services Internet", 1998. and in further view of the article "DPF: Fast Flexible Demultiplexing using Dynamic Code Generation, written by Engler et al. ("Engler")

2. Claims 5, 6, 16, 19, 22, and 23 under 35 U.S.C. §103(a) as being unpatentable over Lakshman in view of Barzilai as applied to claims 1, 13, 14, and 21, and further in view of U.S. Patent No. 6,651,101 issued to Gai et al. ("Gai").

3. Claims 12 and 26 under 35 U.S.C. §103(a) as being unpatentable over Lakshman and Barzilai as applied to claims 1, 11, 21, 24 and 25 above and further in view of what was well known to the ordinary artisan in the networking art at the time the invention was made.

4. Claims 1-14 and 16-26 under 35 U.S.C. §103(a) as being unpatentable over Lakshman in view of U.S. Patent No. 6,209,101 issued to Mitchem et al. ("Mitchem").

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[14] See Specification, page 18, lines 18-22; page 19, lines 1; Figure 3.

VII. ARGUMENTS

The Final Office Action rejected claims 1-14 and 16-26 under 35 U.S.C. §103(a).

Applicants respectfully traverse the rejections and contend that the Examiner has not met the burden of establishing a prima facie case of obviousness for each rejection. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *MPEP §2143, p. 2100-129 (8th Ed., Rev. 2, May 2004).* As analyzed below, none of the rejections meets any of the three basic criteria.

A. Claims 1-4, 7-11, 13, 14, 17, 18, 20, 21, 24, and 25 Are Not Obvious Over Lakshman In View Of Barzilai and Further In View of Engler.

The Final Office Action rejected claims 1-4, 7-11, 13, 14, 17, 18, 20, 21, 24, and 25 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,341,130 issued to Lakshman et al. ("Lakshman") in view of Barzilai et al. ("Barzilai") "Design and Implementation of an RSVP-Based Quality of Service Architecture for an Integrated Services Internet", 1998. and in further view of the article "DPF: Fast Flexible Demultiplexing using Dynamic Code Generation, written by Engler et al. ("Engler").

Lakshman discloses a packet classification method and apparatus employing two fields. In addition to packet forwarding function, a router may perform a packet filtering function (Lakshman, col. 1, lines 65-67). To perform packet filtering, the router may be provided with a table or list of filter rules specifying routing denial or action to be taken according to specified sources or source address (Lakshman, col. 2, lines 3-5). The general packet classification problem of a packet filter may be modeled as a point-location in a multi-dimensional space (Lakshman, col. 2, lines 49-51). A 2-dimensional filter rule operate on two fields S and D which correspond to the source address value and a group identifier (Lakshman, col. 4, lines 65-67; col. 5, lines 1-3).

Barzilai recites an RSVP-Based quality of service architecture for an integrated services Internet where a reservation protocol (RSVP)-based quality of service (QoS) is

[15] See Specification, page 20, lines 20-22; page 21, lines 1-12; Figure 5.

used. Barzilai merely discloses a session handle carried in the buffer header used as the classifier for session specific handling of the packet (Barzilai, page 398, col. 1, paragraph 1, 7th sentence). The session handle therefore is merely a message embedded in the buffer header, not a classifier coupled to the filter to classify and mark one of the differentiated service levels. Further, Barzilai teaches away from Applicant's claimed invention. For example, Barzilai calls for the use of "a statically compiled packet filter . . . ." (Barzilai, page 411, col. 2, paragraph 2).

Engler discloses a fast, flexible message demultiplexing using dynamic code generation. Dynamic code generation is the creation of executable code at run time (Engler, page 1, right column, lines 24-26). The technique exploits dynamic code generation in two ways: by using it to eliminate interpretation overhead by compiling packet filters into executable code, and by using filter constants to aggressively optimize this executable code (Engler, page 2, right column, section 3.1).

None of Lakshman, Barzilai, and Engler discloses, suggests, or renders obvious (1) a controller to dynamically create and remove the filters controlling access to the different service levels, and (2) satisfying filter criteria corresponding to an admission policy related to differentiated service levels. Therefore, there is no motivation to modify or combine Lakshman, Barzilai, and Engler.

The Final Office Action states that Lakshman discloses filters including at least one filter being triggered to denote when a received packet satisfies filter criteria corresponding to an admission policy (filter rules) related to differentiated service levels (Final Office Action, page 2, paragraph 5). But the filter rules are not the admission policy. Filter rules may be based on source addresses, destination addresses, source ports, destination ports, and/or any combination of these fields (Lakshman, col. 2, lines 20-25). The filter merely performs a point-location in a multi-dimensional space (Lakshman, col. 2, lines 49-51). Point-location is not related to differentiated service levels. Furthermore, they are not dynamically created or removed based on an admission profile of the admission policy.

Barzilai merely discloses a session handle, not a classifier to clarify and mark one of the differentiated service levels. The filters are set up at the routers and at the hosts to classify packets belonging to an RSVP flow, and to treat them in accordance with the reservation made for the flow (Barzilai, page 399, left column, lines 12-15). The filter

therefore is a statically compiled packet filter for traffic classification during reservation set up signaling (Barzilai, page 411, right column, lines 13-15).

The Final Office Action states that Barzilai teaches a general classifier for real-time packet forwarding and packet filters that provide general and flexible classification of incoming packets to application end points and dynamic code generation techniques that are applied to realize very efficient packet filters (Final Office Action, page 3, paragraph 6). However, these filters do not have criteria corresponding to an admission policy related to differentiated service levels. They are merely used to classify packets based on the RSVP flow which is uniquely identified by the 5-tuple (protocol, src address, src port, dst address, dst port) (Barzilai, page 399, left column, lines 10-12). Furthermore, none of these filters are created or removed dynamically based on an admission profile of the admission policy.

In contrast, Applicant's claimed invention recites, *inter alia*, an apparatus to "dynamically create and remove filters controlling access to the different service levels based, at least in part, on an admissions profile," (Claim 1) a "method for controlling provision of differentiated services . . . comprising . . . (b) to dynamically install or remove a filter in response to determining whether the received data packet satisfies the filter criteria" (Claim 13), and an "apparatus adapted to facilitate communications between a client device and a remote device, comprising: filter means for controlling access to differentiated service levels; . . . and control means for dynamically creating and removing a portion of the filter means based at least in part on an admission profile." (Claim 21).

The Final Office Action states that Engler discloses dynamic filtering (Final Office Action, page 4, item 8). Applicants respectfully disagree. Engler merely discloses dynamically generating executable code for the filters, not dynamically creating and removing the filters based on an admission profile. The packet filters of Engler are fixed, and can be viewed as application code that is downloaded in to the kernel (Engler, page 5, right column, section 5). Since a kernel has to be always within the system and cannot be created or removed dynamically, the packet filters, being downloaded into the kernel, cannot be created or removed dynamically.

The Final Office Action further states that Barzalai provides motivation to combine by stating that the uses of dynamic code generation techniques that are applied provide for very efficient packet filtering (Final Office Action, page 4, item 9; page 14, item 44).

Applicants respectfully disagree. As argued above, dynamic code generation is not the same as dynamically creating and removing the filters based on an admission profile. Dynamic code generation is a technique to delay compilation until the executable is already running. The code of the packet filter is dynamically compiled, not the filter being dynamically created and removed.

Accordingly, none of Lakshman, Barzilai, and Engler suggests dynamically creating and removing filters. Lakshman merely disclose filter rules, not admission policy. Barzilai merely refers to dynamic code generation to delay compilation of the code for the packet filters, not dynamically creating or removing the filters. Engler discloses dynamically generating executable code for the filter, not creating or removing the filters. Accordingly, there is no suggestion to combine the cited references. Thus, no prima facie case of obviousness has been established.

B. Claims 5, 6, 16, 19, 22, and 23 Are Not Obvious Over Lakshman In View Of Barzilai and Further In View of Gai.

The Final Office Action states that claims 5, 6, 16, 19, 22, and 23 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lakshman in view of Barzilai as applied to claims 1, 13, 14, and 21, and further in view of U.S. Patent No. 6,651,101 issued to Gai et al. ("Gai").

Lakshman and Barzilai are discussed above.

Gai discloses a method and apparatus for identifying network data traffic flows and for applying quality of service treatments to the flows. A local policy enforcer monitors the traffic originating from the network entity and, by examining the IP source and destination addresses, applies the prescribed policy or service treatments to the given traffic flow (Gai, col. 4, lines 61-65). The local policy enforcer may include an admission control module that determines the percentage of time that its CPU as remained idle recently, its available memory for storing policies associated with components, and the availability of its traffic management resources (Gai, col. 12, lines 41-48).

Gai discloses a local policy enforcer to determine the percentage of time that its processor has remained idle and its availability for storing policies (Gai, col. 12, lines 42-47). Since the processor belongs to a local policy enforcer, its memory cannot be a remote

device. Gai, in effect, teaches away from the claimed invention by teaching storing policies in a local memory, not a remote device.

In response to Applicants' argument, the Final Office Action states that Gai discloses that the admission profile is stored in a communicatively coupled remote device, citing Gai, col. 12, lines 25-50 and col. 15, lines 59-64 (Final Office Action, page 8, item 28).

Applicants respectfully disagree. First, the admission control module is used to determine the percentage of time that its CPU has remained idle, its available memory, and the availability of its traffic management resources (Gai, col. 12, lines 44-58). Therefore, it is not the same as an admission policy related to differentiated service levels. Second, the policy server 216 merely examines the network parameters specified for the anticipated traffic flow, including the IP addresses, port numbers and transport protocol (Gai, col. 15, lines 49-52). These parameters are not equivalent to an admission policy related to differentiated service levels as recited in claim 1 from which claim 5 depend. Third, the repository 218 and the end station 220 are locally connected to the policy server 216 as shown in Figure 2 in Gai. They are not a communicatively coupled remote device in a network context.

The Examiner further states that Lakshman, Engler, Barzilai, and Gai disclose wherein the masking of the received data packet includes setting a logic value of a bit in at Type of Service (ToS) field of a header of the data packet, citing Gai col. 3, lines 1-32; col. 16, lines 21-48, and col. 20, lines 25-31. Applicant respectfully disagrees. Gai merely disclose (1) a network layer packet 120 including a type-of-service (ToS) field 122 (Gai, col. 3, lines 1-3), and (2) the packet/frame classifier may be instructed to load the ToS field 122 with predetermined values (Gai, col. 16, lines 42-47), col. 20, lines 25-31). Gai does not disclose or suggest determining if the received data packet satisfying the filter criteria and the ToS field is marked in accordance with the substantial service level.

In view of the above, there is no suggestion or motivation to combine Lakshman, Barzilai, and Gai. In addition, none of Lakshman, Barzilai, and Gai discloses or suggests the elements of the independent claims as argued above. Furthermore, since Gai effectively teaches away from the claimed invention, there is no suggestion to combine the cited references.

C. Claims 12 and 26 are not obvious over Lakshman and Barzilai as applied to claims 1, 11, 21, 24 and 25 above and further in view of what was well known to the ordinary artisan in the networking art at the time the invention was made.

In the Final Office Action, claims 12 and 26 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lakshman and Barzilai as applied to claims 1, 11, 21, 24 and 25 above and further in view of what was well known to the ordinary artisan in the networking art at the time the invention was made.

The Final Office Action states that the Examiner takes Official Notice that a network administrator having the capability to remove filters based on an expiration day or time of day is well known in the networking art (Final Office Action, page 11, paragraph 37). However, if the Official Notice is taken of a fact, unsupported by documentary evidence, the technical line of reasoning underlying a decision to take such notice must be clear and unmistakable. MPEP 2144.03B, page 2100-132, Rev 2, Feb. 2003. Here, Lakshman or Barzilai does not disclose or suggest removing a filter. The Examiner fails to present a technical line of reasoning to show the official notice that controller dynamically removing a filter based on time of day is clear and unmistakable.

Applicants contend that the Examiner did not meet the burden of providing evidentiary showing first before taking official notice, as required by MPEP 2144.04B. In response to Applicants' arguments, the Examiner states that a traversal by the Applicants that is merely a bald challenge, with nothing more, will be given little weight (Final Office Action, page 11, item 37), citing In re Boon, 439 F.2d 724, 169 USPQ 231 (CCPA 1971). Applicants respectfully disagree and contend that Boon does not stand for that proposition. In Boon, the Examiner considered the rotary feeder disclosed by the prior art reference as the equivalent of a double door in the claimed invention. The Board affirmed the Examiner's decision and provided a reasoning to support its decision. The Board further included a definition taken from the dictionary to support the decision. The Court agreed with the Board, stating "...such a reference is a standard work, cited only to support a fact judicially noticed and, as here, the fact so noticed plays a minor role, serving only 'to fill the gaps' which might exist in the evidentiary showing made by the examiner to support a particular ground for rejection." (Emphasis added.) The Court went on to state that "[w]e did not mean to imply...that a bald challenge, with nothing more, would be all that was

needed..." Therefore, the Court in Boon simply states that since the Board took judicial notice to support evidentiary showing by the Examiner, Applicants cannot make a bald challenge to that judicial notice. In contrast, in the instant case, the Examiner did not meet the burden of providing evidentiary showing first before taking official notice, as required by MPEP 2144.04B. The evidentiary showing must include a technical line of reasoning to show the official notice that controller dynamically removing a filter based on time of day is clear and unmistakable. The Examiner also failed to show that the network administrator is equivalent to the controller or the control means, recited in claims 12, 26, and having the characteristics as recited in claims 1 or 21.

Furthermore, even though "time-of-day" is a feature well known in the prior art, this is not claimed in isolation. Claims 12 and 26 recite the controller or control means removes at least one of the filters based on time-of-day. The Examiner has not shown that Official Notice suggests: (1) the controller or control means, and (2) removes at least one of the filters.

D. Claims 1-14 and 16-26 Are Not Obvious Over Lakshman In View Mitchem.

The Final Office Action rejected claims 1-14 and 16-26 under 35 U.S.C. §103(a) as being unpatentable over Lakshman in view of U.S. Patent No. 6,209,101 issued to Mitchem et al. ("Mitchem").

Lakshman discloses a packet classification method and apparatus employing two fields as discussed above.

Mitchem discloses adaptive security system having hierarchy of security servers. The technique provides for the dynamic creation and termination of security servers in order to adapt to organizational policy changes (Mitchem, col. 2, lines 39-41, col. 4, lines 39-41). Each security server executes in a common security domain. In order to create a new security server, the creating task spawns a new thread of execution and commands kernel to execute the spawned thread in the security domain common to the other security servers (Mitchem, col. 4, lines 56-60). To terminate security servers, the task issues a proper command to the kernel, such as a task delete command (Mitchem, col. 5, lines 30-33).

Lakshman and Mitchem, taken alone or in any combination, does not disclose, suggest, or render obvious a controller to dynamically create and remove the filters controlling access to the different service levels.

As discussed above, Lakshman does not disclose admission policy, differentiated service levels, and dynamic creation and removal of filters based on an admission profile. Mitchem merely discloses dynamic creation and termination of security servers, not packet filters. A security server is a task that is executed and managed by a kernel (Mitchem, col. 4, lines 17-20). Since it is a task running within an operating system, it is not equivalent to a packet filter that is located at a network interface to filter packet data. A task in an operating system kernel cannot receive and/or filter packet data in a network. Furthermore, the security policies are not the same the admission policy. The security policies here refer to controlling access to computing resources (Mitchem, col. 3, lines 6-8). In contrast, admission policy refers to differentiated services in a data network.

The Final Office Action fails to show a prima facie case of obviousness. "To defeat patentability based on obviousness, the suggestion...must come from prior art, not from the hindsight knowledge of the invention." Interconnect Planning Corp. v. Feil, 744 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Circ. 1985). Knowledge of applicant's disclosure must be put aside in reaching the obviousness determination. MPEP 2142. When the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the Examiner to explain why the combination of the teachings is proper. Ex parte Skinner, 2 USPQ2d 1788 (Bd. Pat. App. & Inter. 1986). A statement of a rejection that includes a large number of rejections must explain with reasonable specificity at least one rejection, otherwise the Examiner procedurally fails to establish a prima facie case of obviousness. Ex parte Blanc, 13 USPQ2d 1383 (Bd. Pat. App. & Inter. 1989). The ultimate determination of patentability is based on the entire record, by a preponderance of evidence, with due consideration to the persuasiveness of any arguments and any secondary evidence. In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or implicitly suggest the claimed invention or the Examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." Ex parte Clapp, 227 USPQ 972, 973. (Bd.Pat.App.&Inter. 1985). The mere

fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Furthermore, although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." In re Mills 916 F.2d at 682, 16 USPQ2d at 1432; In re Fitch, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992). When applying 35 U.S.C. 103, the following tenets of patent law must be adhered to: (A) The claimed invention must be considered as a whole; (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination; (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and (D) Reasonable expectation of success is the standard with which obviousness is determined. Hodosh v. Block Drug Col, Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986).

Here, none of Lakshman, Barzilai, Engler, and Mitchem, discloses, suggests, or renders obvious (1) a controller to dynamically create and remove the filters controlling access to the different service levels, and (2) satisfying filter criteria corresponding to an admission policy related to differentiated service levels. Therefore there is no motivation to combine these references. In addition, none of Lakshman, Barzilai, Engler and Gai discloses, suggests, or renders obvious (1) admission profile being stored in a communicatively coupled remote device, (2) the remote device being a bandwidth broker, (3) the masking including setting a logic value of a bit in a ToS field, (4) the classifier masking a ToS field of the received data packet to denote a level of service, and (5) the controller removing at least one of the filters based, at least in part, one time-of-day.

In summary, Applicants submit that independent claims 1, 13, 21 and their respective dependent claims are distinguishable over the cited prior art references.

VIII. CONCLUSION

Applicant respectfully requests that the Board enter a decision overturning the Examiner's rejection of all pending claims, and holding that the claims are neither anticipated nor rendered obvious by the prior art.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: October 11, 2005

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IX. CLAIMS APPENDIX

The claims of the present application which are involved in this appeal are as follows:

1. (previously presented) An apparatus adapted to facilitate communications between a client device and a remote device, comprising:

a network interface including (i) filters including at least one filter being triggered to denote when a received packet satisfies filter criteria corresponding to an admission policy related to differentiated service levels, and associated with the at least one filter and (ii) a classifier, communicatively coupled to the filters, to classify and mark one of the service levels associated with the received data packet in response to satisfying the filter criteria associated with the at least one filter; and

a controller coupled to the network interface, to dynamically create and remove the filters controlling access to the different service levels based, at least in part, on an admissions profile of the admission policy.

2. (previously presented) The apparatus of claim 1, wherein the at least one filter when triggered, initiate an admission control decision preventing premature allocation of service level resources which are not yet required or authorized.

3. (previously presented) The apparatus of claim 2, wherein each of the filters is triggered by information contained within the received data packet.

4. (previously presented) The apparatus of claim 3, wherein each of the filters is triggered by one or both of packet source information and packet destination information.

5. (original) The apparatus of claim 1, wherein the admissions profile is stored in a communicatively coupled remote device.

6. (original) The apparatus of claim 5, wherein the communicatively coupled remote device is a bandwidth broker or other generic policy server.

7. (original) The apparatus of claim 1, wherein the admissions profile is available locally within the apparatus.

8. (previously presented) The apparatus of claim 1, wherein the controller establishes an ingress profile in response to detecting an associated trigger event, wherein the ingress profile modifies the received data packet adhering to the filter criteria to denote a particular service level, in accordance with the admissions profile.

9. (original) The apparatus of claim 8, wherein the controller removes ingress profiles when data packets adhering to the filter criteria are no longer received, liberating apparatus resources.

10. (original) The apparatus of claim 8, wherein the controller removes ingress profiles after a predetermined period of time, liberating apparatus resources.

11. (previously presented) The apparatus of claim 1, wherein the controller removes at least one of the filters in accordance with a network administration policy.

12. (previously presented) The apparatus of claim 11, wherein the controller removes at least one of the filters based, at least in part, on time-of-day.

13. (previously presented) A method for controlling provision of differentiated service levels in a data network, the method comprising:

(a) installing a filter on a network edge device to provide a trigger notification upon detecting data packets adhering to filter criteria;

(b) determining whether a received data packet satisfies the filter criteria, the filter criteria corresponding to an admission policy related to the differentiated service levels; and

(c) issuing a command by a bandwidth broker to a controller of the network edge device to dynamically install or remove a filter in response to determining whether the received data packet satisfies the filter criteria.

14. (previously presented) The method of claim 13, further comprising (d) marking the received data packets adhering to the filter criteria according to a subscribed service level.

15. (canceled)

16. (previously presented) The method of claim 14, wherein the marking of the received data packet includes setting a logic value of a bit in a Type of Service (ToS) field of a header of the data packet.

17. (previously presented) The method of claim 14 further comprising:

(e) identifying and marking the received data packets with routing information in accordance with the subscribed service level.

18. (previously presented) The method of claim 17 further comprising:

(f) placing the data packets in a proper format for transmission.

19. (previously presented) The apparatus of claim 1, wherein the classifier marks a Type of Service (ToS) field of the received data packet to denote a level of service for transmission of the data packet.

20. (previously presented) The apparatus of claim 1, wherein the controller further dynamically controls access to at least one classifier profile in accordance with the admission profile.

21. (previously presented) An apparatus adapted to facilitate communications between a client device and a remote device, comprising:

filter means for controlling access to differentiated service levels;

means for classifying and marking one of the service levels associated with the received data packet in response to satisfying filter criteria corresponding to an admission policy related to differentiated service levels, and associated with the filter means, the means for classifying being communicatively coupled to the filter means; and

control means for dynamically creating and removing a portion of the filter means based at least in part on an admission profile of the admission policy.

22. (previously presented) The apparatus of claim 21, wherein the admissions profile is stored in a communicatively coupled remote device.

23. (previously presented) The apparatus of claim 22, wherein the communicatively coupled remote device is a bandwidth broker or other generic policy server.

24. (previously presented) The apparatus of claim 21, wherein the filter means comprises a plurality of filters.

25. (previously presented) The apparatus of claim 24, wherein the control means removes at least one of the filters in accordance with a network administration policy.

26. (previously presented) The apparatus of claim 25, wherein the control means removes at least one of the filters based, at least in part, on time-of-day.

X. RELATED PROCEEDINGS APPENDIX

There are no decisions rendered by a court of the Board in any proceedings which may be related to, directly affect, or be directly affected by or have a bearing on the Board's decision in the pending appeal, as indicated in Section II (Related Appeals and Interferences).

AF/2143

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	24

Application No.	09/222,340
Filing Date	December 28, 1998
First Named Inventor	William F. Terrell
Art Unit	2143
Examiner Name	William C. Vaughn Jr.
Attorney Docket Number	82771P279

ENCLOSURES *(check all that apply)*

- ☒ Fee Transmittal Form
  - ☒ Fee Attached
- ☐ Amendment / Response
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
  - ☐ PTO/SB/08
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
  - ☐ Basic Filing Fee
  - ☐ Declaration/POA
  - ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s)
- ☐ After Allowance Communication to Group
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☒ Appeal Communication to Group **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☐ Other Enclosure(s) *(please identify below):*

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Thinh V. Nguyen, Reg. No. 42,034 BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Signature	
Date	October 11, 2005

CERTIFICATE OF MAILING/TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Typed or printed name	**Tu T. Nguyen**		
Signature		Date	**October 11, 2005**

FEE TRANSMITTAL for FY 2005

Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27.

TOTAL AMOUNT OF PAYMENT	($)	500.00

Complete if Known	
Application Number	09/222,340
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Art Unit	2143
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METHOD OF PAYMENT *(check all that apply)*

☒ Check ☐ Credit card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 02-2666 Deposit Account Name: Blakely, Sokoloff, Taylor & Zafman LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

☒ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR §§ 1.16, 1.17, 1.18 and 1.20. ☒ Credit any overpayments

FEE CALCULATION

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
2053	130	2053	130	Non-English specification	
1251	120	2251	60	Extension for reply within first month	
1252	450	2252	225	Extension for reply within second month	
1253	1,020	2253	510	Extension for reply within third month	
1254	1,590	2254	795	Extension for reply within fourth month	
1255	2,160	2255	1,080	Extension for reply within fifth month	
1401	500	2401	250	Notice of Appeal	
1402	500	2402	250	Filing a brief in support of an appeal	500.00
1403	1,000	2403	500	Request for oral hearing	
1451		2451		Petition to institute a public use proceeding	
1460	130	2460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
1809	790	1809	395	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	790	2810	395	For each additional invention to be examined (37 CFR § 1.129(b))	
				Other fee (specify) _____	
				SUBTOTAL (2)	($) 500.00

SUBMITTED BY Complete (if applicable)

Name (Print/Type)	Thinh V. Nguyen	Registration No. (Attorney/Agent)	42,034	Telephone	(714) 557-3800
Signature				Date	10/11/05

Based on PTO/SB/17 (12-04) as modified by Blakely, Sokoloff, Taylor & Zafman (wlr) 12/15/2004.
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